50000 COUNTS DUAL MEASUREMENT MULTIMETER

CE | USB Host | USB Device | PC Software | GPIB

IDM-8341/8342

FEATURES

- 50000 Counts Vacuum Fluorescent Display with Two Colors
- Dual Measurement
- Fast Measurement Rate Up to 40 readings/s for DCV
- 0.02% DCV Basic Accuracy
- Auto/Manual Ranging
- True RMS (AC, AC+DC)
- 11 Measurement Functions
- Max./Min., REL, MX+B, 1/X, Ref %, Compare, Hold, dB, dBm
- Standard USB Device for Communicating to PC
- Temperature Measurement (IDM-8342 only)
- USB Storage for Data Collection (IDM-8342 only)
- Optional GPIB (factory install for IDM-8342 only)

ISO-TECH rolls out the new generation Dual Measurement Multimeter -- the IDM-8300 Series, which has two models - IDM-8341 and IDM-8342. Its exceptional features include 50,000 counts, VFD dual-display, 0.02% basic DC voltage accuracy and a USB protocol connector to provide users with measurement precision, lucid data observation, and the convenience to connect with the personal computer.

The IDM-8300 Series not only supports the fundamental measurement items provided by general multimeters, but also equips with capacitance and temperature measurement functions. Furthermore, the IDM-8300 Series also provides many auxiliary functions to meet the measurement requirements for manufacturing process tests, educational experiments and testing facilities.

With respect to storing and retrieving data, the IDM-8300 Series has two methods to offer: first, the USB flash drive storage function--- operating alone without connecting with a computer; second, USB interface (virtual COM port) and optional GPIB interface (must be installed in factory) for automatic measurement system users to conveniently save and retrieve data.

Convenient Usb Flash Drive Storage Function

The major distinction between IDM-8342 and products in the same category is that IDM-8342 provides USB flash drive storage function, which allows users to conveniently save data into a USB flash drive through a simple and proper setting. This unique function, different from other digital multimeters which must first save data into its own internal memory then transfer out the file, or connect multimeters with a computer to retrieve data, not only saves operational time but also cuts down the cost and time of developing programs. The USB flash drive storage function incorporates two modes -- basic and advanced, which can be selected from the front panel. When the basic mode is on, data will be saved into an automatically established new folder (time of established file will be determined by system default) and the starting time of data logging will use a fixed time marker (00hr: 00min: 00sec). For advanced mode, users can designate a file path to save data or establish a new folder and the starting time of data logging is determined by users' inputs (for instance: 23hr: 45min: 32sec). The number of data files can be saved in one second is determined by the speed of selected function.
The USB storage function allows each flash drive to establish 100 folders (GW000 ~ GW099). Each folder has a capacity of saving 5,000,000 data files (which are divided into 100 sub-file names, therefore, each sub-file name can save 50,000 data files. Take folder GW000 as an example, internal file names are GW000_00 ~ GW00_99). The storage format is CSV, which can open files and conduct file analysis by existing tools. (such as Microsoft Excel)

Front

Rear Panel

APPLICATIONS

- Production Test and Quality Inspection
- Repair and After Service
- Circuit Design and Debug
- Education Lab and Training Institution

ISO-TECH

SPECIFICATIONS *1*2

DC CHARACTERISTICS

DC VOLTAGE

Range(*3)	Resolution	Input Resistance	Accuracy 1 Year (23°C±5°C)
500.00mV	10µV	10MΩ or >10GΩ	0.02 + 4
5.0000V	100µV	10MΩ or >10GΩ	0.02 + 4
50.000V	1mV	11.1MΩ	0.02 + 4
500.00V	10mV	10.1MΩ	0.02 + 4
1000.0V	100mV	10MΩ	0.02 + 4

RESISTANCE

Range(*3)	Resolution	Test Current	Accuracy 1 Year (23°C±5°C)
500.00Ω	10mΩ	0.83mA	0.10 + 5 (*4)
5.0000kΩ	100mΩ	0.83mA	0.10 + 3 (*4)
50.000kΩ	1Ω	83µA	0.10 + 3
500.00kΩ	10Ω	8.3µA	0.10 + 3
5.0000MΩ	100Ω	830nA	0.10 + 3
50.000MΩ	1kΩ	560nA//10MΩ	0.30 + 3

DC CURRENT

Range(*3)	Resolution	Burden Voltage	Accuracy 1 Year (23°C±5°C)
500.00µA	10nA	0.06Vmax.	0.05 + 5
5.0000mA	100nA	0.6Vmax.	0.05 + 4
50.000mA	1µA	0.14Vmax.	0.05 + 4
500.00mA	10µA	1.4Vmax.	0.10 + 4
5.0000A	100µA	0.5Vmax.	0.25 + 5
10.000A	1mA	0.8Vmax.	0.25 + 5

CONTINUITY

Range(*3)	Resolution	Test Current	Accuracy 1 Year (23°C±5°C)
5000.0Ω	100mΩ	0.83mA	0.10 + 5

DIODE TEST (*7)

Range(*3)	Resolution	Test Current	Accuracy 1 Year (23°C±5°C)
5.0000V	100µV	0.83mA	0.05 + 5

CAPACITANCE

Range(*3)	Resolution	Test Current	Accuracy 1 Year (23°C±5°C)
5.000nF : 0.5~1nF	0.001nF	8.3µA	2.00 + 20
5.000nF : 1~5nF	0.001nF	8.3µA	2.00 + 10
50.00nF : 5~10nF	0.01nF	8.3µA	2.00 + 30
50.00nF : 10~50nF	0.01nF	8.3µA	2.00 + 10
500.0nF	0.1nF	83µA	2.00 + 4
5.000µF	1nF	0.56mA	2.00 + 4
50.00µF	10nF	0.83mA	2.00 + 4

AC CHARACTERISTICS

True RMS AC (or AC+DC – AC Coupled) Voltage (*5*6)

Range(*3)	Resolution	Frequency	Accuracy 1 Year (23°C±5°C)
500.00mV	10µV	30Hz ~ 50Hz 50Hz ~ 10kHz 10kHz ~ 30kHz 30kHz ~ 100kHz	1.00 + 40 0.50 + 40 2.00 + 60 3.00 + 120
5.0000V	100µV	30Hz ~ 50Hz 50Hz ~ 10kHz 10kHz ~ 30kHz 30kHz ~ 100kHz	1.00 + 20 0.35 + 15 1.00 + 20 3.00 + 50
50.000V	1mV	30Hz ~ 50Hz 50Hz ~ 10kHz 10kHz ~ 30kHz 30kHz ~ 100kHz	1.00 + 20 0.35 + 15 1.00 + 20 3.00 + 50
500.00V	10mV	30Hz ~ 50Hz 50Hz ~ 10kHz 10kHz ~ 30kHz 30kHz ~ 100kHz	---- 0.50 + 15 1.00 + 20 3.00 + 50
750.0V	100mV	30Hz ~ 50Hz 50Hz ~ 10kHz 10kHz ~ 30kHz 30kHz ~ 100kHz	---- 0.50 + 15 ---- ----

True RMS AC (or AC+DC – AC Coupled) Current (*5*6)

Range(*3)	Resolution	Frequency	Accuracy 1 Year (23°C±5°C)
500.00µA	10nA	30Hz ~ 50Hz 50Hz ~ 2kHz 2kHz ~ 5kHz 5kHz ~ 20kHz	1.50 + 50 0.50 + 40 1.50 + 50 3.00 + 75
5.0000mA	100nA	30Hz ~ 50Hz 50Hz ~ 2kHz 2kHz ~ 5kHz 5kHz ~ 20kHz	1.50 + 40 0.50 + 20 1.50 + 40 3.00 + 60
50.000mA	1µA	30Hz ~ 50Hz 50Hz ~ 2kHz 2kHz ~ 5kHz 5kHz ~ 20kHz	1.50 + 40 0.50 + 20 1.50 + 40 3.00 + 60
500.00mA	10µA	30Hz ~ 50Hz 50Hz ~ 2kHz 2kHz ~ 5kHz 5kHz ~ 20kHz	1.50 + 40 0.50 + 20 1.50 + 40 3.00 + 60
5.0000A	100µA	30Hz ~ 50Hz 50Hz ~ 2kHz	2.00 + 40 0.50 + 30
10.000A	1mA	30Hz ~ 50Hz 50Hz ~ 2kHz	2.00 + 40 0.50 + 30

FREQUENCY AND PERIOD CHARACTERISTICS

FREQUENCY / PERIOD

Range	Accuracy 1 Year (23°C±5°C)
10Hz ~ 500Hz	0.01 + 5
500Hz ~ 500kHz	0.01 + 3
500kHz ~ 1MHz	0.01 + 5

TEMPERATURE CHARACTERISTICS

THERMOCOUPLES

Type	Range	Resolution	Accuracy(*7)1 Year (23°C±5°C)
J / T / K	-200 °C ~ +300 °C	0.1 °C	2 °C

Note: The specifications apply when the DMM is warmed up for at least 30 minutes and operates in slow rate.

General

Display	VFD, Two Colors Display
Interface	USB device, USB Host (IDM-8342 only)
Power Source	AC 100 V / 120 V / 220 V / 240 V ±10%, 50-60Hz
Power Consumption	Max. 15VA
Dimensions & Weight	265(W) x 107(H) x 302(D) mm, approx. 2.9kg

1. All specifications are ensured only under main (1st) display.
2. Accuracy : ± (% of reading + digits)
3. 2% overrange on all ranges, except 10A.is 20% overrange.
4. REL function is on.
5. The accuracy of AC+DC is equal to AC with 10 more digits added.
6. AC Characteristics are for sinewave input > 5% of range.
7. Specifications do not include probe accuracy.

Specifications subject to change without notice. DM-8300GD1DH

ORDERING INFORMATION

IDM-8342 with GPIB 50000 counts Dual Measurement Multimeter with USB Host/Device and opt.01 GPIB
IDM-8342 50000 counts Dual Measurement Multimeter with USB Host/Device
IDM-8341 50000 counts Dual Measurement Multimeter with USB Device

ACCESSORIES

Safety Instruction Sheet x 1, Power cord x 1, Test lead GTL-207 x 1, CD x 1
(including complete user manual, USB driver and PC software)

OPTION

Opt.1 GPIB Interface

OPTIONAL ASSESSORIES

GTL-205 Temperature probe adaptor with thermocouple (K-type), Approx. 1000mm
GTL-246 USB Cable, A-B type, Approx. 1200mm
GTL-251 GPIB-USB-HS (High speed)

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